NOTE ON SPIROCHAETES IN CASTRATION TUMOURS OF PIGS.

By J. BURTON CLELAND,

Government Pathologist, Perth, Western Australia.

(*From the Pathological Laboratory, Department of Public Health.*)

In pigs in Western Australia it is of frequent occurrence to find at the seat of castration large oval fibrous tumours from the size of an hen's egg to that of a tennis ball. These have a thick fibrous wall with a cavity in the centre, which is frequently small in relation to the size of the mass. The walls of this cavity are brownish-yellow and degenerated and the contents usually sero-pus of a similar colour, though at times a large quantity of ordinary whitish purulent matter is found. In films made from this brownish-yellow pus and stained with weak carbol-fuchsin or Leishman's stain, varying numbers of spirochaetes mixed with minute cocci and bacilli and larger, occasionally spore-bearing, organisms will be found. These spirochaetes vary in length from 6 μ or less to 12 μ; their thickness varies from the most delicate tenuity to that of a tubercle bacillus; the spirals may be three or four and perfectly regular or, on the other hand, quite irregular, and acute bendings even at a right angle may be seen. Further, some of the large apparently bacillary organisms may show slight undulations suggesting that they are large forms of this spirochaete. Sections of the tumour show a fibrous stroma, becoming more cellular towards the centre where it passes into necrosed tissue swarming with organisms, amongst which, sometimes in masses, spirochaetes may be found. Where the still living cells abut on the necrosed area, a varying number of eosinophile cells are revealed by Leishman's stain.

The occurrence of this spirochaete is especially interesting when viewed in connection with the presence in man under certain conditions of *Spirochaeta refringens*. Whether the spirochaete found in the

tumours has a definite etiological relation to their formation or is only an accidental denizen of their cavity, introduced at the time of castration with the organism causing the swelling, it is impossible to say.

Recently Sydney Dodd, in the *Journal of Comparative Pathology* vol. xix. 1906 (vide note, *Journal of Tropical Vet. Science,* vol. ii. no. 2), has described an ulcerative skin disease of pigs, in which the ulcers contained spirochaetes apparently somewhat similar to these.